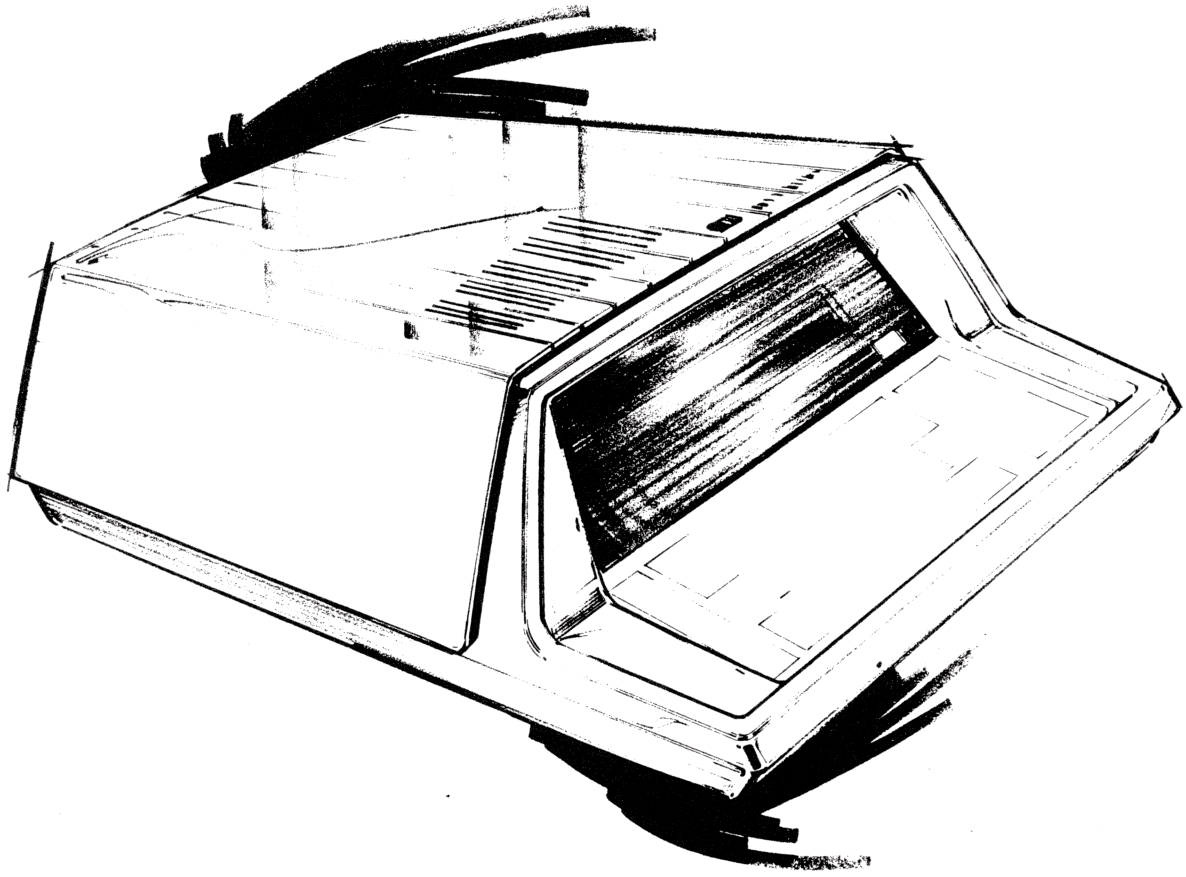
MDT . . .

MICROCOMPUTER DEVELOPMENT TERMINAL



MOS

MICROCOMPUTERS

The MDT650 is a high level system development tool which provides the user with new hardware and software techniques for verifying system designs prior to a finalized design commitment. Interactive design techniques allow the user to engage this system as a total development tool for preproduction and final production systems.

GENERAL SYSTEM DESCRIPTION

The MDT650 provides all of the hardware and software necessary to develop and assemble user programs. In addition, the unit contains several features which make it a very powerful tool for debugging both the hardware and the software for the system being designed. The unit can pay for itself very rapidly by eliminating time-sharing costs and by greatly reducing the total system development time.

MDT650...THE MICROCOMPUTER DEVELOPMENT TERMINAL

Two MCS650X series microprocessors are used to control all system functions. Interaction with the MDT650 is normally with the integral keyboard/display, however TTY or other terminal device can also be used. Expandable I/O configurations are TTL compatible.

The standard MDT650 system allows the user to assign up to 65K of memory as desired (with independent address and data bases). The ROM resident system monitor includes all necessary functions for program loading, debugging, and execution. A resident assembler may be used to assemble machine instructions. A resident editor provides source language editing capability.

HARDWARE FEATURES

- Integral Keyboard with separate function keys for control.
- Built-in 32 character display.
- Serial input for interfacing a serial terminal.
- Two address traps are provided to halt the user processor on: any address; instruction; read cycle or write cycle.
- Two scope syncs: address trap sync and instruction fetch cycle cync.
- Single instruction mode with firmware enhancement.
- Trace stack memory for storing the last 128 machine cycles.
- Seven board positions provided for user memory, bus light display, I/O or user options such as custom wire wrap boards.
- Control firmware for the assembler, disassembler, and test editor that is independent of the user's 65K memory limit.

SOFTWARE SUPPORT

The MDT650 software consists of three programs: the assembler, the disassembler and the text editor.

The MDT assembler is upwards compatible with the MCS650X Cross-Assembler. Features include:

- Can assemble from source tape or user RAM.
- Six character labels and symbols.
- Free-form entry of source statements.
- Symbol table output.
- Error flags on listing.
- Assembled program is ready for execution.

The MDT disassembler commands include:

- Load interface file (symbols and code).
- Go to address. Execute one instruction and automatically disassemble.
- Run. Executes user program.
- Trap address and mode. Sets appropriate instruction.
- Forward one instruction from current location in stack.
- Backward one instruction.
- Show last/next cycle. Address, label at this address (if any), data, and decoded flags are displayed.

The MDT text editor program saves considerable money and frustration during the process of generating the system program.

- Load text buffer
- Insert or delete line
- Insert or delete character at current position in line
- Forward/backward one character
- Step forward or backward to next blank (Very useful for jumping from label field to OP Code field, etc.)
- Go to top or bottom of text
- Index up or down one line
- Find a specified string of characters
- Provide output text to printer/punch

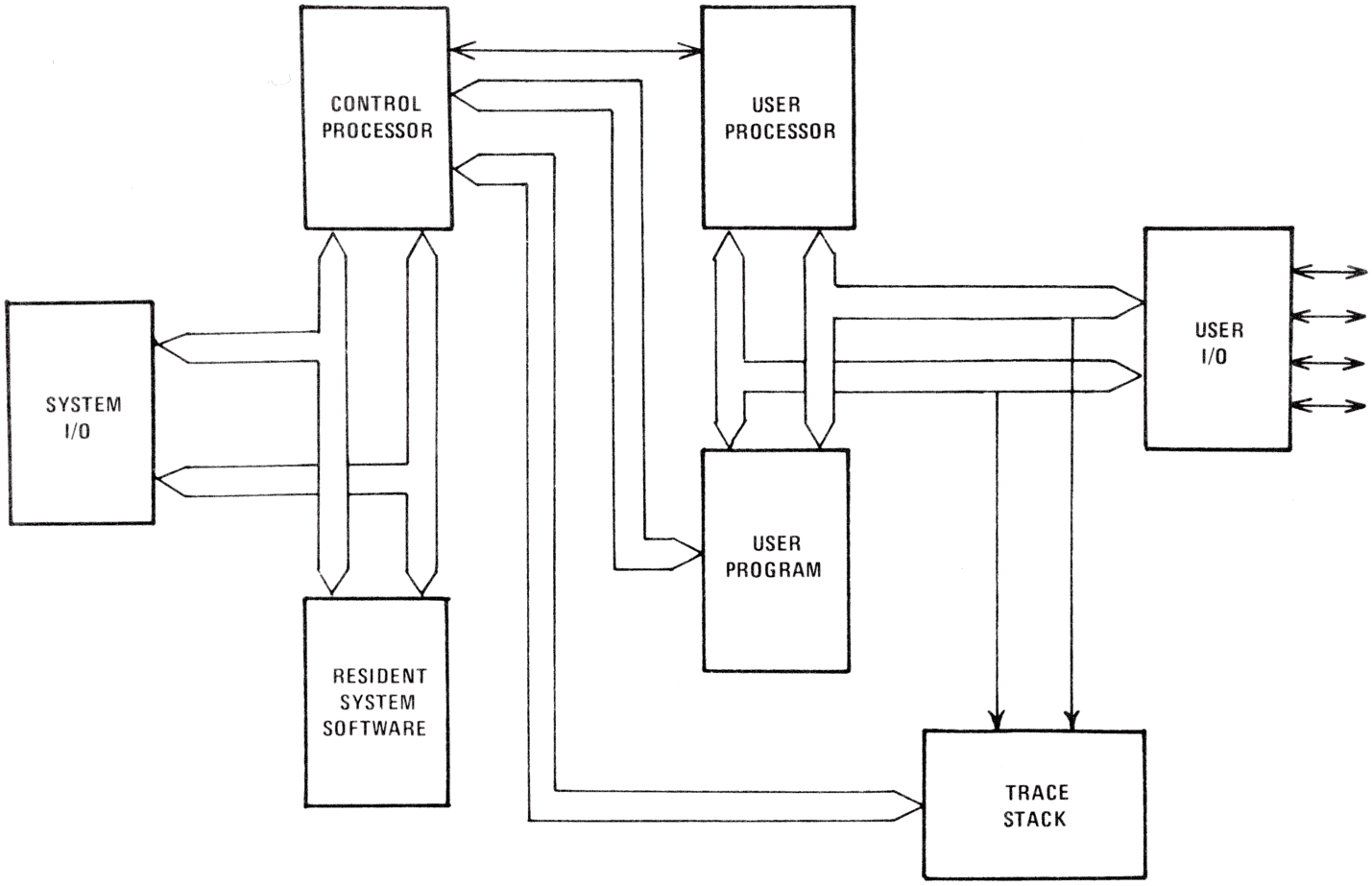
STANDARD EQUIPMENT (BASE SYSTEM)

Dual Micro Processor Module
RAM Memory Module
Program trace and address trap board
I/O board for Keyboard, Display and
Peripherals
Resident Monitor ROM Module
Chassis with 14 Board Slots
Power Supplies
Finished Cabinet
Keyboard and Display
Assembler
Text Editor
User's Manual
MCS650 Assembly Language Programming Manual
MCS650 Assembly Language Reference Card

OPTIONS

PROM programmer available for 82S115, 2708 or 1702A.
Wire-wrap boards for custom designs.
Extender board module

Light display board to display address and data busses
4K RAM board
8K PROM board
2K RAM/4K PROM board
I/O boards...allows interfacing system to various peripheral devices and terminals
Floppy disc
ICE (In-Circuit Emulator)



BLOCK DIAGRAM OF MDT 650

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